Rather than cater to the efforts of these competitors to expand their existing artificial advantage, the Commission instead should adopt rules that will adapt to rapidly changing competitive conditions, and will provide consumers the benefits of true competition. As Dr. Kahn explains in the accompanying affidavit, the specific measures the Commission should adopt are three-fold.

First, services which are already competitive should be removed from price regulation now.[80] This includes services that are currently part of the interexchange basket and high capacity access services -- services which other commenters acknowledge have declined in price as a result of competition.[81] It also includes telephone company video dialtone services which will compete with cable companies from the very day they are

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[80] Id. at ¶ 29; see also Bell Atlantic Comments at 19-23.

[81] See supra note 6. In addition, shortly after comments were filed here, AT&T introduced new promotional rates for some of its interstate, intraLATA services that specifically target customers served by Bell Atlantic and other local telephone companies. This provides still further evidence of the competitiveness of these services, which are included in Bell Atlantic's interexchange basket of services. A copy of AT&T's tariff transmittal and an advertisement for the promotion are attached at Tab 3.

introduced. In addition, other services should be removed from regulation as they become competitive.[82]

Second, services that are either new or discretionary also should be removed from price regulation.[83] This will provide LECs with additional incentives to develop and provide innovative services, and will promote investment in the infrastructure used to deliver these services.[84]

Third, LECs should be given added flexibility for services that remain subject to regulation to ensure that, as competitive pressures intensify, consumers receive the benefits of competitive pricing for all services at the earliest possible point.[85]

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[82] Contrary to the claims of competitors, however, the standard for determining whether services are competitive is not market share. See, e.g., Comments of AT&T at 16-18; Comments of MFS at vii. On the contrary, it is the availability of alternatives that constrains the exercise of market power, and it is the availability of alternatives that should be the principal criterion for determining whether particular services are competitive. See R. Schmalensee and W. Taylor, Reply Comments: Market Analysis and Pricing Flexibility for Interstate Access Services at 14 (June 29, 1994) (attached to USTA Reply Comments).

[83] Kahn Aff. at ¶¶ 30-32.

[84] Id.; see also Bell Atlantic Comments at 23-26.

[85] See Kahn Aff. at ¶¶ 12-34; see also Bell Atlantic Comments at 26-28.

V. **The Commission Should Adopt Rules Providing Parity of Regulatory Treatment Among All Competitors**

Finally, it is critical for the FCC to adopt rules that will not artificially favor or handicap particular competitors in the marketplace. This fundamental principal applies here in a number of respects.

First, as described above, the Commission's rules must provide parity of regulatory treatment between all providers that remain subject to regulation. This is particularly true with respect to the rules that apply to the LECs and the cable industry as they move rapidly into competition for one another's core businesses.

Second, the FCC must provide parity between LECs and their unregulated competitors in a number of respects. In particular, this means that LECs must have the same flexibility as their competitors to change prices in response to competitive pressures. In addition, it means that AT&T should be required to give equal treatment to access charge reductions from all providers, including itself.[86]

Third, if the Commission is to realize its goal of a competitive network of networks,[87] any rules requiring LECs to

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[86] See Bell Atlantic Comments at 29.

[87] See generally Statement of Reed E. Hundt Before the Senate Committee on Commerce (Feb. 23, 1994).

provide interconnection or to unbundle their services must apply to all competitors. For example, applying these rules to cable companies would allow new broadband service providers to use existing drops or other cable facilities to deliver competing services. And applying these rules to interexchange competitors would allow new entrants to use the existing facilities of AT&T and MCI to deliver competing long distance services.

CONCLUSION

The Commission should modify its existing price cap rules in the respects identified above, and in Bell Atlantic's initial comments in this proceeding.

Respectfully submitted,

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Of Counsel

June 29, 1994

Before The
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
Price Cap Performance Review for Local Exchange Carriers	)	CC Docket 94-1
Notice of Proposed Rulemaking	)	

AFFIDAVIT OF ALFRED E. KAHN

I. BACKGROUND, QUALIFICATIONS AND SUMMARY

(1) My name is Alfred E. Kahn. I am the Robert Julius Thorne Professor of Political Economy, Emeritus, at Cornell University and Special Consultant to National Economic Research Associates, Inc. My business address is 308 North Cayuga Street, Ithaca, New York 14850.

(2) Among the experiences of mine most pertinent to my submission in this proceeding are that I was Chairman of the New York State Public Service Commission between 1974 and 1977 and of the Civil Aeronautics Board in 1977-78; I am the author of the two-volume The Economics of Regulation, published originally by John Wiley & Sons in 1970 and 1971 and reprinted in 1988 by The MIT Press; I have written and testified extensively on the subject of telecommunications regulatory policy and published a book and numerous articles on antitrust policy. I was a member of the Attorney General's National Committee to Study the Antitrust Laws and the National Commission for the

Review of Antitrust Laws and Procedures. I have been advisor on telecommunications policy to Governor Carey, of New York State, and recently completed service as a member of the Ohio Blue Ribbon Panel on Telecommunications Regulatory Reform and of the New York State Telecommunications Exchange. I attach a copy of my full résumé as an Appendix to this affidavit.

(3) In its consideration of possible refinements and revisions of the rate caps to which Bell Atlantic is subject, which constitute the specific subject of this proceeding, I suggest it is essential that the Commission bear in mind its broader policies for the reform of telecommunications regulation generally, of which the imposition of rate caps has been an important component. The purpose of this submission is--at the risk of telling the Commission things it already knows and reminding it of the policies on which it has already embarked--to place the specific issues raised by the several parties in the broader context of the rapid and fundamental changes that are taking place in the telecommunications industries and the consequent urgent need for continued reform of the way in which it is regulated.

II. THE DEVELOPING COMPETITION IN TELECOMMUNICATIONS

(4) The telecommunications industry is undergoing rapid, fundamental transformation, a transformation extending to what has until recently been the very core of franchised monopoly, the local exchange network and local service. The imminence of ubiquitous competitive challenges to the LECs from cable television companies is the most recent and perhaps most dramatic development: by 1992 their coaxial cable already passed some 93 percent of all American households and their subscribers constituted about 58 percent;[1] and they are clearly planning, often in collaboration with others, to convert their systems to offer two-way switched services. The most striking of these alliances have been with out-of-territory telephone companies--US West's investment in Time Warner, Southwestern Bell's acquisition of the cable properties of Hauser and Bell Canada's investment in Jones Intercable--with the LECs combining their capital and expertise with

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[1]"Statistical Abstract of the United States 1993," U.S. Department of Commerce, p. 55 and "Kagan Media Index Historical Data Base," March 23, 1994, p. 10. According to NCTA, cable now passes some 97 percent of all television households and serves over 63 percent. Cable Television Developments, April 1994, 1-A.

the facilities of the cable companies directly to challenge the incumbent local telephone companies. Early fruitions of these developments are the recent announcements by the Southwestern Bell cable system in Montgomery County, Maryland, that it will provide ubiquitous local telephone service in competition with Bell Atlantic and by Time Warner that it will offer local telephone service in Rochester, New York, in direct competition with Rochester Telephone.[2] Almost simultaneously, MFS, one of the largest CAPs, which already has authority to provide local service in Maryland and New York State, announced that it would do so also in Rochester.[3] In addition, nonwireline cellular companies, using the radio spectrum, offer a means of access to a growing body of subscribers alternative to that of the LECs. Subscribers to cellular telephone accounted for 11.5 percent of all households in 1992 and are growing at some 46.5 percent a year.[4] This trend explains AT&T's planned acquisition of McCaw cellular and MCI's $1.5 billion investment in Nextel, another wireless provider. Other potentially even more ubiquitous wireless offerings, such as personal communication services, are on the horizon.

(5) The proliferation of competitive alternatives has been most extensive in the case of LEC access services, where it has been actively supported by this Commission and state regulatory bodies. These growing pressures are not surprising considering that these services, and particularly high volume access services for business customers, are provided in heavily concentrated and relatively small geographic areas and have historically been priced at artificially high levels in order to subsidize residential local rates. These two factors--high geographic concentration and large markups--encourage customers to bypass the LEC facilities. For example, MCI recently announced plans to "wage the biggest war [they] possibly can" on the local telephone companies, including $2 billion of investment

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[2]"Southwestern Bell Plans Phone Service For Its Cable Customers in Sibling's Turf," The Wall Street Journal, May 23, 1994; "Time Warner Plans to Provide Switched Telephone Service In Rochester After Approvals Are Received," Time Warner Cable Corp. Affairs, May 16, 1994.

[3]"MFS, Following Time Warner, to Enter Local Phone Market in Rochester, NY," The Wall Street Journal, May 19, 1994, p. B8.

[4]"1993-1994 Telecommunications Market Review and Forecast," North American Telecommunications Association, p. 90. Statistical Abstract of the United States 1993, U.S. Department of Commerce, p. 55. Growth rate is for the period 1989-1992. According to Cable Telecommunications Industry Association (CTIA) there are now 16 million subscribers to cellular service. The Wireless Factbook, Spring 1994, p. 1.

in providing alternative access to long distance providers (such as itself) in the top twenty markets in the country.[5] In addition, competitive access providers (CAPs) provide dedicated access lines in the downtown business districts of virtually every large metropolitan area, linking customers and long-distance carriers, in direct competition with the LECs. CAPs have also begun to add switching capacity to their local networks and switched services to their mix of offerings.[6] The declining cost and increased versatility of switching has likewise made possible the proliferation of privately-owned networks. In consequence, more business phones in the United States are today linked, in the first instance, to their own local exchanges or switches (PBXs) than to those provided by a local telephone company.[7]

III. THE SUPERIORITY OF COMPETITION OVER REGULATED MONOPOLY

(6) There is a broad consensus in the United States, based on experience in industry generally and in telecommunications in particular, that wherever it is feasible, competition is superior to franchised monopoly, however closely regulated, in serving the consumer and public interest. Since this is a conviction that the Commission itself shares and has often expressed,[8] it would be superfluous for me to belabor the point: regulation can, at best, emulate the results of competition in holding or driving prices to cost; but, as practitioners and students of regulation alike have long recognized,[9] traditional regulation,

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[5]"MCI Proposed a $20 billion Capital Project," The Wall Street Journal, January 5, 1994, p. A3.

[6]"Michigan, Illinois, New York See New Local Competition Action," State Telephone Regulation Report, April 21, 1994, pp. 5-6 and undated MFS Advertisement. See also Order No. 71155, Application of MFS Intelnet of Maryland, Inc. For Authority to Provide and Resell Local Exchange and Interexchange Telephone Service, Case No. 8584 (Md. PSC April 25, 1994).

[7]Peter W. Huber, Michael K. Kellogg and John Thorne, The Geodesic Network II, 1993 Report on Competition in the Telephone Industry (Washington, D.C.: The Geodesic Company, 1992, hereinafter Geodesic Network II), Table 2.2, p. 2.3.

[8]For example, see "Decisions and Reports of the Federal Communications Commission of the United States," Federal Communications Commission Reports, Vol. 96, Second Series, August 1-September 30, 1984, pp. 47-48.

[9]For a review on this, see Kahn, Alfred E., The Economics of Regulation, Vol. II, Chapter 2, See also Noll (1989) (Noll, Roger, "Economic Perspectives on the Politics of Regulation," in Handbook of Industrial Organization, Vol. II, eds. R. Schmalensee and R.D. Willig, Elsevier Science Publishers B.V., 1989).

which has been essentially cost-plus in character, is inherently incapable of ensuring that those costs themselves are minimized; and even reformed, incentive regulation--such as the price caps that the Commission has embraced--is incapable of fully replicating the constant pressures that competition exerts on suppliers to improve their efficiency. Nor can regulated monopoly match the performance of companies subject to the incessant disciplines of competition to innovate--to offer consumers a constantly evolving variety of services and bundles of services, both old and new.

(7) Regulation, no matter how enlightened, is particularly incapable of matching the competitive process in those aspects of performance--crucially important in the technologically dynamic telecommunications industry--that cannot be predicted. The essence of the case for deregulation is the unpredictability of what will prove to be the optimal structure or performance of any industry, and especially one subject to rapid technological change. Market participants under the discipline of the competitive process have an ability to probe the limits of the unpredictable and the unforeseeable and to adapt nimbly if they are to survive that cannot be matched under any regulatory scheme. If and as competition becomes feasible, even if only imperfectly so, the best course is to abandon all direct regulation and concentrate on making competition work as well as possible.

(8) These considerations underline the importance, in this proceeding (and all other such), of the Commission modifying such regulations as continue to be necessary, in ways that duplicate as fully as possible the incentives and processes of competition.

IV. THE CONTINUED NEED FOR REGULATION AND CONSEQUENT DISTORTIONS AND SUPPRESSIONS OF COMPETITION

(9) Competition has not, of course, developed at the same pace in all telecommunications markets, and for this reason regulation will continue to be necessary to protect customers who do not yet enjoy its protection sufficiently. This is particularly true of basic local service to residential and small business subscribers and to some extent of LEC access services to competitors--although, to repeat, large business customers, particularly in concentrated metropolitan areas, already have effective competitive alternatives and recent technological changes permit us to predict with some confidence

that even the former, core business will be subject to increasingly intense, diversified competitive challenges in the near future.

(10) On the other hand, it has become increasingly clear that the particular protections that regulators have enacted in response to these continuing needs have often either been or have become incompatible with efficient competition--either distorting or actually suppressing it.[10]

(11) This has been true, first of all, of the regulatorily-prescribed rate structures of the incumbent telephone companies. Because those structures have generally incorporated deliberate, massive subsidizations of some services--particularly basic local service to residential subscribers and in rural areas--at the expense of others--most prominently access services to businesses in concentrated urban areas and toll--they have created strong artificial incentives for competitors to enter the latter, overpriced markets, whether or not they are the more efficient suppliers.

(12) Second, continuing regulatory restrictions on the LECs--such as required approvals, cost justifications, reporting requirements and restrictions on their prices--bearing on them but not on their competitors, not only handicap them in competing but to this extent also deprive consumers of the full benefits of their possible competition, enabling rivals to obtain business by pricing at levels just below the prevailing regulatorily-prescribed rates. For example, it is surely anomalous, as Bell Atlantic points out, for it to be subject to these kinds of restrictions on its pricing of such very competitive offerings as high-capacity access services.

(13) Such handicaps are often justified, either explicitly or implicitly, on the ground that the entrants require some preferences in order to give them a fair opportunity to enter markets and so eventually to give the public the benefits of competition. Deliberate efforts to "jump start" competition in this way, whether by giving preferences to the entrants or handicapping incumbents, constitute a form of infant industry or infant company protection.

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[10]The following discussion draws in part on my "The Uneasy Marriage of Regulation and Competition," Telematics, Washington, DC, September 1984.

(14) While it is not possible to state, as a general proposition, that infant industry protections are unequivocally incorrect, most economists would question their wisdom in most circumstances. First, they inevitably impose immediate costs on consumers and the economy because, by placing restrictions on the freedom of incumbents to compete or higher costs on them than their rivals, they prevent business from being distributed among competitors on the basis of their relative costs. Second, while those costs are tangible and certain, the benefits are not: it is virtually impossible to determine in advance that a would-be competitor both requires and deserves some special preference--that is to say, that the long-term benefits to consumers of the competition encouraged in this way, properly discounted for both their futurity and their uncertainty, exceed the costs. The lesson of history, instead, is that so long as companies are insulated from competition, they are, to that extent and for that reason, less likely ever to "grow up" and undertake to compete without such special protections. The system encourages them, instead, to devote their energies primarily to seeking (before both regulators and the courts) to perpetuate their preferential subsidies and protections. The history of U.S. telecommunications regulation amply confirms the importance and dangers of this kind of continual "rent-seeking." For all these reasons, it is preferable by far to leave determinations of the long-term prospects of new and uncertain ventures to the market generally and to financial markets in particular: if a new venture of this kind is indeed meritorious, the general presumption is that investors will be willing to supply the necessary capital.

(15) This preference is particularly compelling as it relates to would-be competitors in telecommunications, where the principal aspiring entrants are obviously neither newcomers nor "infants." The most prominent ones are either themselves or affiliates of long-distance carriers like AT&T and MCI or cable companies or manufacturers of electronic equipment or of computers, like Motorola. Among the largest competitive access providers are MFS, a subsidiary of a large international construction firm, and Teleport, which is jointly owned by Cox Enterprises, TCI and Time Warner, among others; and, as I have already pointed out, some of the threatening direct competitors of local exchange companies are combinations of the country's largest multiple cable system operators and domestic or foreign telephone companies.

(16) The differences in the price cap regulation applicable to the LECs on the one side and such competitors as AT&T and the cable companies (the latter in alliance in some cases with MCI, in others with large out-of-region telephone companies), on the other, represent another possible source of distortion of the competition between them. Those competitors are subject to "pure" price caps--indexation for inflation less a productivity offset. The LECs' price caps, in contrast, continue to incorporate a number of elements of rate of return regulation, such as "sharing" and "lower bound" adjustments and the use of regulatorily prescribed depreciation rates. As I will explain presently, the pure price cap schemes provide superior incentives for new investment and innovation. In a situation of intensifying competition among these entities, any such impediments to the LECs upgrading their own local networks--to provide superior interconnection for interexchange communications or video services--would presumably subject them to competitive disadvantages unrelated to their potential efficiency, with consequent injury, ultimately, to the consuming public.

(17) Similarly, whatever justification they may have in terms of preventing unfair competition, categorical exclusions of the LECs from offering competitive services--such as the Cable Act's ban on offering video programming in their own service areas and the provisions of the MFJ barring the Bell Operating Companies from offering interLATA services and manufacturing equipment--are inherently anticompetitive. Manifestly, preventing unfair competition by flatly prohibiting competition entirely on the part of its feared perpetrators is the most anti-competitive way conceivable of achieving the desired protection. The costs to the consuming public are probably large because of the versatility of telecommunications technology and the extensive economies of scope--the economies of using common productive facilities and managerial competence to offer a multiplicity of services--that it exhibits.

V. THE DIRECTIONS OF ESSENTIAL REGULATORY REFORM

(18) The adaptation of regulation to the increasingly pervasive intrusion of competition into telecommunications markets is, necessarily, a continuing process. Overall, the trend in the country at large is unmistakably in the direction of a coherent policy of permitting and promoting free and efficient competition by all participants, including the

LECs, and subjecting the latter companies to the discipline and incentives of the market. This means, primarily, abandonment or severe modification of the protectionism of the regulated entities and their distorted price structures entailed in restrictions on competitive entry, on the one side, and of regulatory handicapping of incumbents, on the other. And it means devising methods of regulating services in whose provision competition has not fully developed in ways that protect consumers without incumbering and handicapping their providers in competing elsewhere. Those various adaptations remain only partial and incomplete, however; and inconsistencies, distortions and dilutions of entrepreneurial incentives remain.

A. **Substitute direct price for rate-of-return regulation**

(19) The Commission, along with most other students of regulation, has already recognized the benefits of substituting direct price for rate-of-return regulation. The most important is that price ceilings mitigate the cost-plus character of traditional regulation and therefore provide the companies with enhanced incentives to be efficient and innovative, and--specifically in the case of telecommunications--to invest in upgrading their infrastructure in order to be able to offer new services. In these various ways, regulation is reformed so as more closely to approximate the ways in which competition works.[11]

(20) So long as the price caps continue to be tested from time to time against the rate of return they produce, as they are under the current plan applicable to the LECs, the perverse effects of cost-plus regulation on the companies' incentives will not be entirely eliminated. The same is true of the provisions for sharing and backstops[12]: they dilute

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[11] As the FCC stated clearly in 1988,

> This 'price-cap' approach to regulation replicates the competitive process more accurately because it allows carriers to increase their earnings by innovating in the provision of service and reducing their costs. At the same time, the presence of the cap protects ratepayers by limiting carriers' flexibility to increase earnings by raising prices, padding costs or engaging in cross-subsidization. Moreover, in the long run, this system should be less complex to administer and should reduce regulatory costs.

Further Notice of Proposed Rulemaking, In the Matter of "Policy and Rules Concerning Rates for Dominant Carriers", CC Docket No. 87-313, released May 23, 1988.

[12] FCC, Policy and Rules concerning Rates for Dominant Carriers (CC Docket No. 87-313), Report and Order, adopted September 19, 1990.

the complete transfer from ratepayers to shareholders of the risks and benefits of unsuccessful or successful performance. The longer the interval between reexaminations of the price caps and the wider the range of achieved rates of return that regulators, the utility companies and the public can tolerate, the closer will be the approximation to the workings of competition. The ultimate reform is, clearly, to sever the link between costs and rates and to subject the LECs to "pure" price caps, just as the Commission has already done in the case of AT&T and the cable industry.

(21) The extraordinarily great importance of innovation in telecommunications provides the strongest reasons for eliminating all vestiges of rate base/rate of return regulation. By narrowing the range of profits that companies may expect to obtain from such ventures--and, as part of the same process, by typically permitting the current recovery of depreciation at rates widely recognized as unrealistically low for industries subject to rapid technological change[13]--those remaining elements of rate of return regulation tend to inhibit the undertaking of risky innovations.[14] This damping tendency is accentuated by the understandable reluctance of regulators fully to pass on to ratepayers the sometimes very large costs of ventures that turn out unsuccessfully. Those remaining elements therefore have a tendency not merely to narrow the range of expected profit outcomes but to do so asymmetrically--giving rise to an expectation that risk-taking companies may be denied the ability to recover the costs of unsuccessful ventures while being denied also the ability fully to retain the offsetting profits of successful ones.

(22) The competitive ideal is that risks of innovative ventures be borne not by ratepayers but by investors. In this model, ratepayers are not required to bear the losses stemming from unsuccessful investments; by the same token, neither are they permitted to appropriate the profits stemming from successful ones. The converse of this proposition

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[13]See Kahn *The Economics of Regulation*, Vol. 1, pp. 117-122, "Depreciation Policy and Technological Progress," and Vol. 2, pp. 146-47, 149-50.

[14]I observed this tendency more than 20 years ago, while at the same time offering the opinion that its practical effect was probably slight. Ibid., Vol. 1, pp. 53-54. This was however before some of the large write-offs of the 1980s. See also Crandall, *After the Breakup: U.S. Telecommunications in a More Competitive Era*, Washington, DC: Brookings Institution, 1991, Chapter 3.

is of course that if the risks are to be borne by the investors, they must see the opportunity of retaining the supernormal profits from successful ventures.

(23) We have in the last very few years experienced a growing public recognition of the very large benefits to the economy at large of encouraging major investments by the telephone companies in what it is now a cliché to refer to as information superhighways--requiring very large investments in the digitalization of their networks and conversion to fiber optic transmission--while avoiding the imposition of unreasonable burdens on the subscribers to basic service. These investments--and the public's attitude toward them--have several characteristics arguing strongly for taking them fully out from under any remaining elements of traditional rate base/rate of return regulation. First, they are very large and very risky: their profitability will depend heavily on their ability to deliver new, diversified services the demand for which is highly uncertain and the offer of which may well be highly competitive. Second, despite the widespread conception that a modern electronic highway is likely to have very large external benefits to society at large--in terms of reducing congestion, saving transportation costs, permitting the superior delivery of such heavily publicly-funded services as education and health care and contributing powerfully to the increase of productivity and international competitiveness--there is a great reluctance to expend large sums of public money on their development. This is so not only because of the ubiquitous constraints on government budgets but also because of the inevitable uncertainty, in an environment of constantly changing technology, about the wisdom of particular investment programs. The third factor is the preoccupation of public policy makers with keeping the price of basic telephone service low and affordable, so as not to jeopardize the universality of subscription to it, and so with not permitting these investments to impose a burden on basic rates.

(24) These considerations lend added weight to the reform of the present LEC price cap plan that I have already recommended--substitution of a pure price cap on services for which competition has not fully developed and that we are determined to keep affordable, regardless of what happens to overall company costs and revenues. Such an arrangement has the virtue not only of protecting purchasers of the latter services from the outcomes of these huge new investments and the profitability or unprofitability of the services that they promise to be able to deliver; it also has the at least equal virtue of

placing on the shareholders of the private companies the responsibility and the risks of the major new investments required, along with the undiluted incentive to assume those risks because they will profit fully and without dilution to the extent the investments prove successful.

(25) Pure price cap regulation has the additional great virtue of making it possible to relax the restrictions on the ability of utility companies to compete and so mitigates the distortions of competition that those restrictions entail. Under rate of return regulation--and, to a lesser extent, under price cap schemes that retain elements of rate of return--there is always at least a theoretical possibility that the utility company, having reduced the prices of its competitive services, may be able to return to the regulator and obtain the right to raise prices of its less competitive services, in order to enable it to earn at the authorized level overall. This danger in turn provides the rationale for regulators setting floors under the competitive prices, with the enthusiastic support of the utility companies' rivals, floors typically above incremental cost--in order to make a "fair contribution" to the company's overall revenue requirements--and therefore at potentially inefficiently high levels.

(26) This is not to deny the possibility that unregulated companies as well may engage in predatory pricing. What makes no sense in unregulated markets, however--and also makes no sense under pure price caps--is cross-subsidization: there is no reason for unregulated firms not to have set the prices of their less competitive services at profit-maximizing levels already and firms subject to pure price caps not to have set them at the most profitable level permitted by the caps. In both situations this leaves no opportunity for recoupment of net revenue losses flowing from predation. We do not in unregulated markets guard against possible predation by setting floors under the prices of competitive services: it is widely recognized that such a practice would be far more likely to suppress competition, on balance, than to protect it. It is only the presence of rate base/rate of return regulation that creates the possibility of recoupment and therefore of cross-subsidization.

(27) The obvious solution to the problem of potential cross-subsidization, therefore, is not to put floors under the prices or otherwise hamstring the telephone companies in competitive markets but to abandon any remaining elements of rate base/rate

of return and substitute for it direct regulation of the prices of monopoly services, in this way breaking the link between those prices and overall company costs, prices and revenues. In its pure form, direct price regulation eliminates any entitlement of regulated companies to recover from monopoly customers any reductions in rate of return resulting from price cuts in competitive markets. It correspondingly eliminates any incentive of the regulated companies to shift costs from unregulated or competitive to less competitive services. Under price caps--or any form of incentive regulation that breaks the link between observed costs and prices--the LEC is no more able to cross-subsidize than an unregulated firm: if it invests money in the destruction of its rivals, it will have to absorb that investment as a reduction in its earnings and hope to recoup its losses later under more favorable circumstances.

(28) Yet another benefit of adopting pure price caps is that it would free LECs to pursue economically correct depreciation policies henceforward. Because prices would no longer be linked to earnings, measured by regulatorily prescribed accounting, the factors that have historically induced regulators to prescribe (what are widely recognized to have been) unrealistically slow depreciation policies for such purposes would no longer apply. Once prices are capped, the adoption of faster depreciation rates thereafter would not affect prices but would instead come out of reported profits.

B. Deregulation of competitive services

(29) The logic of this reform is so widely acknowledged, it seems superfluous to do more than mention it; but, clearly, as services become subject to effective competition, the proper solution is simply to deregulate them and, in so doing, eliminate all regulatory asymmetries and distortions of competition between the LECs and their rivals. Moreover, individual services should be removed from regulation as soon as they become competitive, and should be removed from regulation across whatever geographic area competition is present. It would be nonsense, for example, to suggest that no service should be deregulated until all services are competitive or to suggest that a service that is clearly competitive in one geographic area should not be deregulated in that area because it may not be competitive in some other geographic area--no matter how distant. This reform, unexceptionable in principle, may of course raise problems in practice: it can be very difficult in particular cases to obtain agreement among all interested parties about

services are or are not subject to effective competition. It is partly--but only partly--in recognition of these problems of administering this unexceptionable rule that I strongly support the following two additional reforms.

C. **Deregulation of all new services**

(30) The case for prompt deregulation of all genuinely new services does not depend on specific prior determinations that the relevant markets are effectively competitive. The logic of extending the deregulation of all effectively competitive services to all new services--whether or not subject to effective competition--is straightforward. To the extent that services are truly new, the conception of monopoly power in their provision is of dubious meaning or significance. New services offer customers additional alternatives not available to them previously. In the broader sense, therefore, their introduction is fundamentally a competitive rather than a monopolistic phenomenon, even though they may be distinctive and the innovator may be in a position to earn supernormal profits from them. It is difficult to see any justification, for example, for subjecting Bell Atlantic's proposed new video dialtone service to price cap regulation--all the more so because it will compete with the established services of the incumbent cable companies.

(31) As the distinguished economist Joseph A. Schumpeter emphasized, the process of innovation--which he characterized graphically as a "process of creative destruction"[15]--is a profoundly competitive phenomenon, which, at one and the same time, creates temporary monopolies and destroys preexisting ones. Those temporary monopolies provide both the necessary incentive and reward for risk-taking innovation, the primary key to economic progress. There is no reason to deny an innovator the rewards of being first--denial would inhibit innovation--and it should not matter whether the innovator is an LEC or a new entrant.

D. **Deregulation of all non-core or discretionary services**

(32) In my firm judgment, the logic of the market and of entrusting the exploitation of telecommunications technology to unconstrained entrepreneurialism--subject only to such economy-wide governmental protections as are embodied in the antitrust laws--

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[15] J. Schumpeter, Capitalism, Socialism and Democracy, Harper Colophone Books, 3rd Ed. 1975) at 81 (title of Chapter VII).

requires taking out of public utility regulation all non-core, non-basic or otherwise discretionary services--even services of which the telephone company may be the sole supplier, for the following reasons:

1. These discretionary services can in no sense be considered essentials or virtual essentials of life, like electricity or water or basic telephone service, such as have traditionally been the principal focus and rationalization of rate regulation.
2. Imposing regulatory constraints on the provision of such services, both new and old, inhibits entrepreneurialism and innovation. As I have already asserted, the fullest possible probing of the possibilities inherent in modern telecommunications technology calls for freeing private enterprises to undertake fully the risks of innovation--both marketing and technological--with the prospect of full enjoyment of the rewards of successes, inhibited by neither the need for regulatory approvals nor the prospect of regulatory recapture of the gains from them.
3. So far as existing discretionary services are concerned, many of them already have effective alternatives--answering machines for call-forwarding or E-mail, for example. For those that do not, opening their provision to the superior constraints of competition seems imminently possible, as the LECs comply with the regulatory requirements the Commission has already adopted--such as comparably efficient interconnection, open network architecture and collocation.
4. Even with respect to existing non-basic services in the provision of which the LECs may have monopoly power, what is required is a resolution that continues to reserve for the benefit of protected customers the profits that have historically flowed from those services to hold down charges for services that may be considered essential--particularly the basic monthly charge to residential customers. This is typically accomplished under rate cap regulation by beginning the future indexation of the affected rates at the historic level, which already reflects that contribution. It is not a question, therefore, of freeing the LECs to reap new and additional monopoly profits from preexisting discretionary services: they have typically been priced already to maximize the contribution to basic service. In this way, however, incremental profits or shortfalls that might flow

from changes in market circumstances--whether reflecting good or bad luck, improvements or failures of efficiency, successful or unsuccessful innovation--would accrue to investors, as the competitive ideal requires.

VI. CONCLUSION

(33) The ultimate ordering of telecommunications that I envision in this testimony, and that I believe the Commission envisions as well, is one in which the exploitation of the enormous potential of its dynamic technology would be left to the profit-seeking enterprise of any and all participating and potentially participating suppliers, risking their own capital in offering whatever services they think may have a profitable market, constrained only by the competition of others engaged in similar ventures and by a continuing public commitment to preserving the universality of basic or essential service.

(34) This means, ultimately, freeing not only any and all potential entrants but also the incumbent LECs: to offer whatever new services they wish, wire-based and radio-based, both locally and outside their traditional local service areas; to enter whatever markets they see fit to enter, whether by new investment or by acquisition (the latter subject only to the scrutiny of the antitrust laws), bearing the full risks of loss from any unsuccessful ventures, in exchange for the unrestricted right to the full profits from successful ones; to take such actions without prior regulatory approvals or subsequent second-guessing; and to compete without restrictions that are not imposed on their competitors.

(35) This means, in the present proceeding, that the Commission should adopt a pure price cap regulatory scheme for the LECs, remove one-sided regulatory restraints that limit their ability to compete and remove from regulation services that are competitive, new and/or discretionary. Ultimately, this means full deregulation of price, conditions of service, service offerings and of entry and exit from any and all telecommunications markets.

Alfred E. Kahn

Alfred E. Kahn

Sworn before me this 28th day
of June, 1994.

Delores S. Haring

Notary Public

My commission expires 6/30/96

DELORES S. HARING
Notary Public, State of New York
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Qualified in Tompkins County
Commission Expires June 30, 1996

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Professor Kahn is the Robert Julius Thorne Professor of Political Economy, Emeritus, at Cornell University.

He has been Chairman of the New York Public Service Commission; Chairman of the Civil Aeronautics Board; and Advisor to the President (Carter) on Inflation and Chairman of the Council on Wage and Price Stability.

Professor Kahn received his Bachelor's and Master's degrees from New York University and a Doctorate in Economics from Yale University. Following service in the Army, he served as Chairman of the Department of Economics at Ripon College, Wisconsin. He moved to the Department of Economics at Cornell University, where he remained until he took leave to assume the Chairmanship of the New York Public Service Commission. During his tenure at Cornell, Professor Kahn served as Chairman of the Department of Economics, member of the Board of Trustees of the University and Dean of the College of Arts and Sciences.

Throughout his career, Professor Kahn has served on a variety of public and private boards and commissions including: the Attorney General's National Committee to Study the Antitrust Laws; the senior staff of the President's Council of Economic Advisors; the Economic Advisory Council of American Telephone & Telegraph Company; the National Academy of Sciences Advisory Review Committee on Sulfur Dioxide Emissions; the Environmental Advisory Committee of the Federal Energy Administration; the Public Advisory Board of the Electric Power Research Institute; the Board of Directors of the New York State Energy Research and Development Authority; the Executive Committee of the National Association of Regulatory Utility Commissioners; the National Commission for Review of Antitrust Laws and Procedures; the New York State Council on Fiscal and Economic Priorities; the Governor of New York's Fact-Finding Panel on Long Island Lighting Company's Nuclear Power Plant at Shoreham, L.I.; the Governor of New York's Advisory Committee on Public Power for Long Island; the National Governing Board of Common Cause; and, in 1990, as Chairman of the International Institute for Applied Systems Analysis Advisory Committee on Price Reform and Competition in the USSR.

He has also served as a court-appointed expert in State of New York v. Kraft General Foods, Inc., et al., U.S. Disctrict Court, S.D.N.Y.; Advisor to New York Governor Carey on Telecommunications Policy; and as a consultant to the Attorneys General of New York, Pennsylvania and Illinois, the Ford Foundation, the National Commission on Food Marketing, Federal Trade Commission, Antitrust Division of the Department of Justice, the U.S.

Department of Agriculture and the City of Denver on charging and financing of Stapleton Airport.

He has received L.L.D. honorary degrees from Colby College, Ripon College, Northwestern University, the University of Massachusetts and Colgate University, and an honorary D.H.L. from the State University of New York, Albany; he also received the Distinguished Transportation Research Award of the Transportation Board Forum, The Alumni Achievement Award of New York University, the award of the American Economic Association's Transportation and Public Utilities Group for Outstanding Contributions to Scholarship, The Henry Edward Salzberg Honorary Award from Syracuse University for Outstanding Achievement in the Field of Transportation, and the Burton Gordon Feldman Award for Distinguished Public Service from Brandeis University; and was elected to membership in the American Academy of Arts and Sciences and Vice President of the American Economic Association. He is a regular commentator on PBS's "The Nightly Business Report."

He has testified before many U.S. Senate and House Committees, the Federal Power Commission, the Federal Energy Regulatory Commission and numerous state regulatory bodies.

Professor Kahn's publications include *Great Britain in the World Economy; Fair Competition: The Law and Economics of Antitrust Policy* (co-authored); *Integration and Competition in the Petroleum Industry* (co-authored); and *The Economics of Regulation.* He has written numerous articles which have appeared in *The American Economic Review, The Quarterly Journal of Economics, The Journal of Political Economy, Harvard Law Review, Yale Journal on Regulation, Yale Law Journal, Fortune, The Antitrust Bulletin* and *The Economist,* among others.

EDUCATION:

YALE UNIVERSITY
Ph.D., Economics, 1942

UNIVERSITY OF MISSOURI
Graduate Study, 1937-1938

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M.A., Economics, 1937
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EMPLOYMENT:

1961-1974 NATIONAL ECONOMIC RESEARCH ASSOCIATES, INC.
1980- Special Consultant

	CORNELL UNIVERSITY
1947-1989	Assistant Professor; Associate Professor; Robert Julius Thorne Professor of Economics; Robert Julius Thorne Professor of Political Economy, Emeritus, 1989-; Chairman, Department of Economics; Dean, College of Arts and Sciences; on leave 1974-80.
	NEW YORK UNIVERSITY SCHOOL OF LAW
Spring 1989	Visiting Meyer Professor of Law
	UNITED STATES GOVERNMENT
1978-1980	Advisor on Inflation to President Carter
1978-1980	Chairman, Council on Wage and Price Stability
1977-1978	Chairman, Civil Aeronautics Board
1955-1957	Senior Staff, Council of Economic Advisors to the President
1943	U.S. Army, Private
1943	War Production Board
1942	Associate Economist, International Economics Unit, Bureau of Foreign and Domestic Commerce, Department of Commerce
1941-1942	Associate Economist, Antitrust Division, U.S. Department of Justice
	NEW YORK STATE PUBLIC SERVICE COMMISSION
1974-1977	Chairman
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1940, 1950-1951	Staff Economist
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1945-1947	Assistant Professor, Chairman, Department of Economics
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1993	Court-appointed expert in State of New York v. Kraft General Foods, Inc., et al., U.S. District Court, S.D.N.Y.
1992	New Zealand Telecom on the progress of competition in New Zealand telecommunications
1992	Rochester Telephone Company on corporate restructuring and deregulation
1992	Russian Government on economic reform
1991	British Mercury on terms of competition with British Telecom
1989	City of Denver on charging and financing of Stapleton Airport
1988-1990	Attorneys General, New York and Pennsylvania, on airline mergers
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